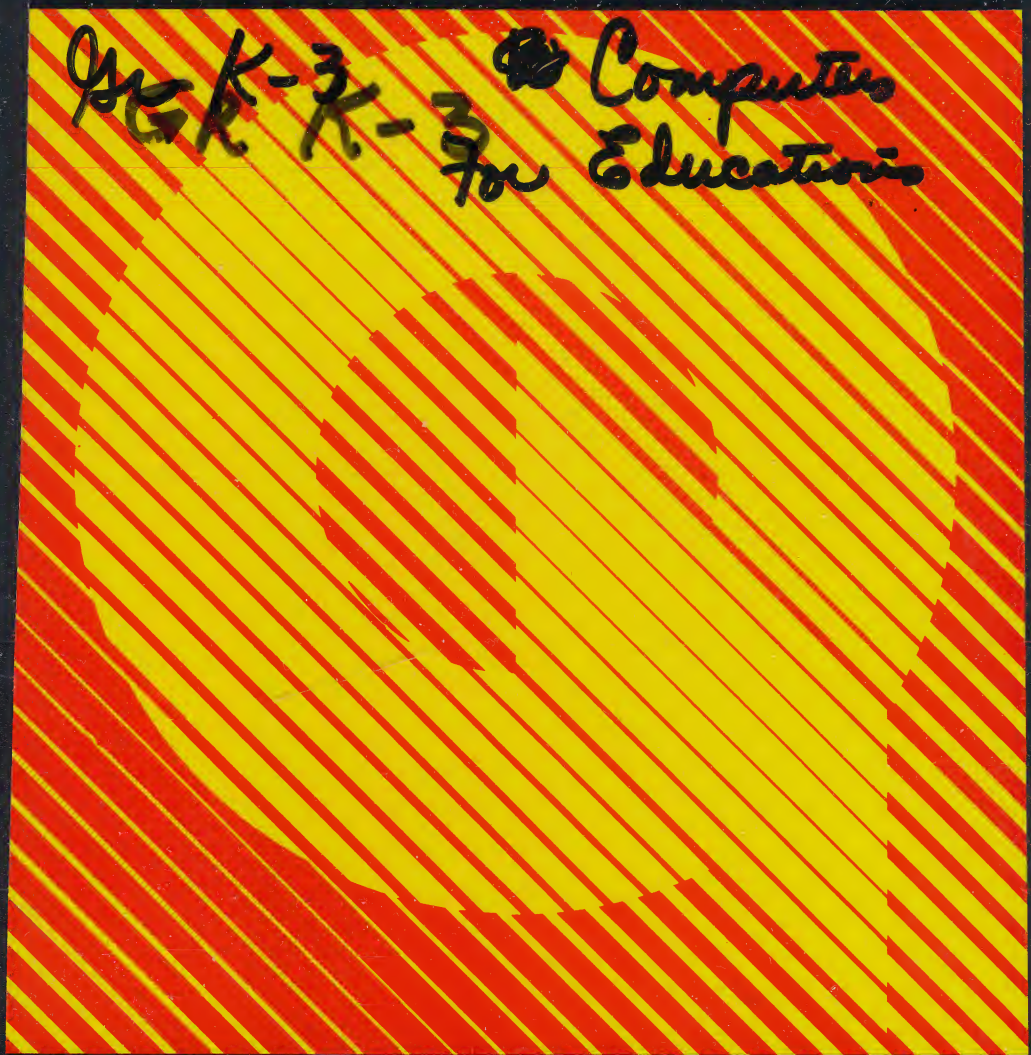
QUEUE

INTELLECTUAL SOFTWARE

WORKING WITH WORDS



Queue, 338 Commerce Drive, Fairfield, CT 06430

1-800-232-2224 • 203-335-0908

QUEUE

INTELLECTUAL SOFTWARE

WORKING WITH WORDS

Queue, 338 Commerce Drive, Fairfield, CT 06430

1-800-232-2224 • 203-335-0908

Table of Contents

Working with Words

Introduction 2
Program Flow 2
Before You Start 3
Starting the Program 4
Entering the Password 4
The Task Menu 5
Task: Teach a Substitution Lesson 5
Task: Review Student Performance 8
Task: Manipulate Student Records 8
Task: Browse Through Sentences 12

The Update Program

Introduction 16
Update Program Overview 16
Before You Start 19
Starting the Update Program 19
The Skill Menu 20
Function: Add New Sentences 20
Function: Replace Sentences 24
Support 32

© 1985 Queue, Inc.

WORKING WITH WORDS

INTRODUCTION

WORKING WITH WORDS provides a comprehensive consolidation of material for use in teaching the application of phonetic skills. Stressing the role of vision and using the dynamic display of the video screen to support the teaching of this dynamic process, WORKING WITH WORDS significantly enhances the learning process when compared to traditional teaching methods having to cope with the inherent limitations imposed by the static nature of print media.

The above factors make WORKING WITH WORDS equally well suited for use either as the primary or as a supplementary resource for regular classroom teachers. Excelling in effectiveness when used with students with various degrees of learning difficulties, it is considered an ideal and invaluable resource by remedial reading and special education teachers.

Included on the same diskette is an UPDATE program which permits making selective material modification. Since this program also allows the creation of new data files, WORKING WITH WORDS' utility can be extended to meet other specialized needs - such as teaching English to foreign language speaking adults or teaching students with severe learning disabilities.

The material taught, using controlled vocabulary, is graded for standard instruction use in Grade One through Grade Three. This implies suitability for use by some Grade Ones, by most Grade Twos and by all Grade Threes. When used with students experiencing reading difficulty, the grade range can be extended considerably.

PROGRAM FLOW

Following program start-up, the current password must be provided to gain 'entry' into the program. Once entered, full access is gained to the various menus and their associated functions.

Before a student's first session can commence, a cumulative record will have been prepared (activated) for him from the pool of 130 records available on the diskette.

A teaching session, of no pre-determined duration, can then be teacher-initiated. Session length may be controlled by the teacher or alternately, if preferred, by the student. Its duration may be based on either time lapsed or on progress.

While a session is in progress, student performance is automatically recorded in the appropriate cumulative record. Last-session and cumulative-session performance data may subsequently be reviewed as required.

Normal session termination is accomplished using either the unrestricted teacher's password or the restricted student password especially provided for this purpose. The less elegant method of terminating a session by turning off the computer can also be used.

To provide for deviation from the normally sequential presentation of sentences, a student record may be RESET forward or backward to commence the next student session at any desired sentence. The speed with which letters appear on the screen may also be adjusted and in-session progress may be displayed. In addition, the teacher password may be reset; sentence material 'browsed' through and student records manipulated.

BEFORE YOU START

It is in the user's interest to first read the entire documentation before proceeding to use either of the programs for the first time. Next, at least one back-up copy should be made.

Any copy program (such as the one found on your DOS Master Diskette) may be used to create a back-up copy. To prevent accidental erasure of the original, its write-protect notch should be covered before running the copy program.

Note: You must not cover the write-protect notch on disks students will be using. Student information is written to disk each time the student correctly answers a question. If the disk has the write-protect notch covered, a DOS error message will be displayed.

You may only copy the program for your own use. You may not sell or give away copies of the program or the teacher's manual. Unauthorized copying is a violation of the United States Copyright Laws.

STARTING THE PROGRAM

The recommended method of starting the WORKING WITH WORDS program is to use a copy of the original diskette to 'boot' DOS. To do so, first turn off the computer and then insert the diskette into the appropriate disk drive. Upon turning on the computer, WORKING WITH WORDS automatically starts to run.

Certain Apple computer keyboards provide an 'OpenApple' key to the left of the 'space bar'. If such a key is available, 'powering-off' is not desirable and simultaneously pressing the 'Control-OpenApple-Reset' triple-key combination should be used instead.

Alternately, all 'powered-up' computers may use the PR#n command where 'n' is replaced by the disk drive SLOT (usually 6) into which the diskette was inserted.

Where it is preferable to issue a LOAD 'programname' followed by RUN, or RUN 'programname', the 'programname' is TITLE. The commands would therefore be LOAD TITLE and RUN TITLE respectively. The program named PHONICS cannot be run directly.

ENTERING THE PASSWORD

A password is used to 'lock-out' unauthorized users and to permit full student-record confidentiality. It is the first keyboard entry requested following program startup.

Two attempts may be made to provide the current password. Whereas providing the current password then results in full access to the TASK MENU, failure to do so deletes the program from memory and requires a return to 'Starting The Program'.

The password at time of purchase is CTRL-SHIFT-Z, a single-key entry produced by first holding down the CTRL key, followed by simultaneously pressing the SHIFT key, followed by simultaneously pressing the Z key.

Note that certain Apple computers label the CTRL key 'Control' and the SHIFT key 'Shift', in which case the 3-key combination would read 'Control-Shift-Z'.

Other identical-function keys are labeled ESC and 'Esc' and lastly, RETURN and 'Return'.

THE TASK MENU

The TASK MENU is displayed immediately following the current password entry. From this menu, any one of four tasks may be selected. These tasks are:

1. TEACH SUBSTITUTION LESSON
2. REVIEW STUDENT PERFORMANCE
3. MANIPULATE STUDENT RECORDS
4. BROWSE THROUGH SENTENCES

PROGRAM TERMINATION is not menu-selectable. It is achieved, as the line at the bottom of the screen indicates, by pressing the ESC key. Accidental program termination requires a return to 'Starting The Program'.

Task selection is made by first pointing to (highlighting) the number preceding the desired TASK.

Pointing is accomplished by pressing one of the numbers displayed. Alternately, if available, the up and down arrow keys may be used instead.

Pressing the RETURN key then completes the selection.

Task: Teach a Substitution Lesson

There are five phonetic SKILLS which may be taught, namely:

1. INITIAL CONSONANTS	(110 sentences)
2. INITIAL BLENDS	(96 sentences)
3. MEDIAL VOWELS AND DIPHTHONGS	(170 sentences)
4. FINAL CONSONANTS	(47 sentences)
5. FINAL BLENDS	(52 sentences)

Before a student's initial session in a particular phonetic SKILL can commence, a student record must first be created for him for the SKILL to be taught. Although this will rarely ever be the case, it is conceivable that a student may have up to five currently active student records, namely one for each SKILL to be taught.

Initiating a teaching session from the TASK MENU is accomplished by selecting TEACH SUBSTITUTION LESSON (by pressing 1 and then RETURN). If the TASK MENU is not displayed, pressing ESC once will do so.

The SKILL MENU is now displayed, and the message TASK: TEACH SUBSTITUTION LESSON appears on the top line of the screen. This message is called a TRACE LINE and always indicates the previous MENU selection made or some other vital information.

The desired SKILL to be taught may now be selected by entering the number preceding the SKILL (highlighting it) and then pressing RETURN.

The SKILL selected becomes the second TRACE LINE at the top of the screen. Below appears a list of student names - the names of all students for whom a student record was ADDED into the selected SKILL's record pool. Each name is in turn preceded by a letter commencing with A and the student to be taught may now be selected by pressing the letter preceding his name.

Immediately following this selection sequence, the appropriate student record is retrieved from the diskette. The session then commences following the termination point of the last session. For the first session this starting point is the first sentence - unless it was RESET to another value.

While the session is in progress, two session-related parameters may be controlled, namely the speed with which the characters appear on the screen and when session-termination is to take place.

THE SPEED ADJUSTMENT FEATURE

A feature not to be overlooked is the capability to adjust the speed with which letters appear on the screen (writing speed) and the pause between phonetic substitutions (substitution speed). With the substantial speed range provided, WORKING WITH WORDS is suitable for use with the broadest range of individual differences.

Speed adjustments can be made in the range from 1 to 9, where 1 is the slowest speed and 9 is the highest speed. The speed setting appropriate for average students is 5 - which is also the value stored in each student record when first prepared. Upon commencing a teaching session, this stored speed value is retrieved for use and remains in effect until altered.

Speed adjustments may be made whenever CHOOSE THE RIGHT WORD appears on the screen during a teaching session. A 1-digit adjustment is made by issuing a CTRL-F (faster) or a CTRL-S (slower) command, acknowledged by a display of the speed setting now in effect. To clear the speed setting from the screen, press RETURN, which simultaneously restores the CHOOSE THE RIGHT WORD message. Another speed adjustment may now be made or the teaching session may continue.

Note that the new speed setting must be written to disk if the change is to be made permanent. This requires that at least one sentence be answered correctly (a student record is updated on disk immediately following a correct answer).

TERMINATING A TEACHING SESSION

A teaching session may be terminated at any time by entering the password (CTRL-SHIFT-Z) or CTRL-Q (Quit) anywhere a student keyboard response is solicited. Either of these commands can also be used when the GO GET YOUR TEACHER message appears, indicating that the end of the sentences has been reached.

Terminating a session via use of the password returns to the TASK MENU. Termination via CTRL-Q, however, terminates the program as well. If teaching sessions are to be terminated by students, use of the CTRL-Q is recommended.

Since student response data are written to disk immediately following a correct response, a teaching session may also be terminated by turning the computer off - when all disk activity has ceased.

CURRENT-SESSION PROGRESS MONITORING

A student's progress during a session may be monitored by pressing the '?' (question mark) key anywhere a student keyboard response is solicited. These progress data consist of the number of sentences completed and the number of answers entered up to this point (legitimate tries). To resume the session following its use, press RETURN.

This capability will be found useful in determining session duration based on work completed rather than on time lapsed. It may also be made known to students where it is felt that they can benefit from this feedback.

Task: Review Student Performance

Student records are used to store both student-related and session-related variables. In addition to the STUDENT NAME, they contain:

1. First-session starting sentence
2. Current display speed setting
3. Number of sessions to date
4. For cumulative sessions -
   a. Number of sentences completed (right)
   b. Number of wrong responses
5. For last session -
   a. Number of sentences completed (right)
   b. Number of wrong responses

To review a student record, select REVIEW STUDENT PERFORMANCE from the TASK MENU (press 2 and then RETURN). From the subsequently displayed SKILL MENU, select the SKILL to be reviewed. Lastly, from the subsequently displayed list of student names, select the desired student's record by pressing the letter preceding his name.

The selected student record is now displayed, providing the option of either reviewing additional student records or returning to the TASK MENU. Pressing RETURN continues the review cycle by again presenting the list of student names. Pressing ESC instead returns to the TASK MENU.

Task: Manipulate Student Records

WORKING WITH WORDS maintains five student-record 'pools' containing 26 records each, with each pool in turn being designated to hold only one specific SKILL's records. At time of purchase, 25 student records are cleared and 1 student record has been added to the active list in each pool, namely one for the student named EXPERIMENTER. These five records are provided for experimentation only and may be cleared for re-use as desired.

Selecting this task is followed by displaying the FUNCTION MENU with its four user-selectable functions. The FUNCTIONS are:

1. ADD A NEW STUDENT RECORD
2. CLEAR ONE STUDENT RECORD
3. RESET STARTING SENTENCE
4. CLEAR ALL STUDENT RECORDS

In brief, the ADD A NEW STUDENT RECORD function is used to prepare a student's cumulative record for each SKILL to be taught.

The CLEAR ONE STUDENT RECORD function is the counterpart of the ADD A NEW STUDENT RECORD function. It is used to clear (free for re-use) a student record prepared by the ADD function.

The RESET STARTING SENTENCE function is used to permit a student's first teaching session to commence at other than the first sentence.

The CLEAR ALL STUDENT RECORDS function provides a fast means of clearing (freeing for re-use) all 130 student records.

FUNCTION: ADD A NEW STUDENT RECORD

The first keyboard entry requested following selection of this function is the name of the student to be added. Its length is limited to 14 letters, indicated by the 14 dashes displayed. As a lettered key is pressed, this letter replaces the leftmost dash. If the left-arrow or the delete key is used, the procedure is reversed - the rightmost letter is in turn replaced by a dash.

Completion of the name-entry request is signalled by pressing RETURN. Immediately following, a compact screen is formatted so as to permit anywhere from 1 to 5 cumulative records to be added for this student (one per PHONETIC SKILL being taught).

Pointing to the desired PHONETIC SKILL for which a student record is to be added is again accomplished by highlighting the number preceding it, namely by entering a number in the range of 1 to 5.

For the PHONETIC SKILL pointed to, pressing RETURN now alters the word under the ADD column from NO to YES - meaning that a student record is to be ADDED for this specific SKILL. If the RETURN key is pressed again, YES toggles

(changes) to NO, indicating that a student record is NOT TO BE ADDED for this PHONETIC SKILL. Note at this time that merely turning NO to YES does not result in the immediate creation of the student record.

Pointing to another PHONETIC SKILL has no effect on the ADD column entry - it is left intact (either YES or NO). In this manner, additional YES entries can be made. When the desired number of YES entries has been made, **6 (NOW PREPARE ON DISK) must be pressed to commence the actual student record preparation.**

Pressing 6 is now followed by attempting to ADD (prepare), for this student, a student record for each of the PHONETIC SKILLS in which YES appears in the ADD column. The success or failure of each attempt may now be monitored in the corresponding STATUS column.

As a rule, the words ADDED will appear in the STATUS column, indicating that the student record was successfully added. There is one condition, however, under which the words NOT ADDED will appear there instead, accompanied by an audible alert. This condition occurs when all 26 available student records for that PHONETIC SKILL are in use, hence the requested student record could not be (and was not) added. Use of the CLEAR ONE STUDENT RECORD function may be appropriate at this time.

Following processing of all the YES entries, a new screen now permits continuation of the student record addition cycle. Pressing RETURN re-enters this cycle, commencing with the required name entry.

The ESC key may be used at any time to abort (terminate) this function prematurely. Care should therefore be taken to avoid pressing ESC instead of 6 (NOW PREPARE ON DISK).

FUNCTION: CLEAR ONE STUDENT RECORD

This function is used to CLEAR (free for re-use) one student record at a time, that is, to singly clear records created using the ADD A NEW STUDENT RECORD function. It is usually used upon lesson completion, indicated by the GO GET YOUR TEACHER message.

Once this function has been selected, from the subsequently displayed SKILL MENU, select the SKILL (pool) containing the student record to be deleted. Next, from the subsequently

displayed list of students for whom a student record was added, press the letter preceding the student's name whose record is to be deleted.

Actual clearing of the student record then takes place, freeing it for re-use. Following this task's completion, a TRACE LINE on the next screen confirms that the CLEAR function was carried out and provision is made for the optional re-cycling within this function. Pressing RETURN re-enters the cycle, commencing with the list of students displayed previously -minus the name of the student whose record was deleted.

Note that clearing a student record destroys its contents. If a permanent record of student performance data is to be kept, these data should be manually recorded before commencing with the CLEAR function. Note also that the letter preceding a student's name may change after each cycle through the CLEAR function and that the data in an erroneously cleared student record cannot be retrieved.

FUNCTION: RESET STARTING SENTENCE

This function may be used to RESET the STARTING SENTENCE stored in a student record so as to permit the student's next session to commence at the sentence number specified. It is used primarily to alter the normal instruction sequence, but may also be found useful in recovering from diskette damage.

Resetting a starting sentence requires that a specific student record be identified first. The procedure for doing so again entails specifying, from the displayed SKILL MENU, the SKILL (pool) to which the student record was added. Again, from the subsequently displayed list of student names, pressing the letter preceding a student's name is sufficient to complete the student record identification.

Once the student record has been identified, the next screen requests entry of the new starting sentence number. Note also the additional TRACE LINE for the number of sentences on file for this phonetic skill.

The instructions are ENTER STARTING-SENTENCE NUMBER and either 2 or 3 dashes limit the magnitude of the number to be entered. Entry of the sentence number at which the next teaching session is to begin can now proceed. When entered, pressing RETURN is followed by an automatic updating of the student record to reflect the new value.

When the disk operation has completed, a new screen permits continuation of the reset starting-sentence cycle. Pressing RETURN re-enters the cycle, commencing by again displaying the list of names.

FUNCTION: CLEAR ALL STUDENT RECORDS

This function may be used to CLEAR (free for re-use) all 130 student records, as is usually the case at the end of a school term or preceding WORKING WITH WORDS' use with a total change of data files.

To prevent accidental clearing, the password must be entered when requested. Failure to do so returns to the TASK MENU, leaving all student records intact. Once the password is entered, clearing commences and cannot be terminated.

It is for this reason that the first-level password should not be used by students to terminate their own teaching sessions - the second-level password (CTRL-Q) should be used instead.

Note that using this function destroys the contents of all student records and that it is necessary to manually record student performance data if a permanent record is to be kept.

Task: Browse Through Sentences

This task permits the sequential preview of all sentences, commencing at any sentence. Since the data to be displayed contain predominantly lower-case letters which certain Apple computer models are incapable of displaying, the situation may arise in which the letters displayed just don't make sense. To avoid this problem, all lower-case letters may be converted to UPPER-CASE before being displayed.

If the message MUST I DISPLAY IN UPPER CASE? appears, a response of Y (yes) or N (no) will also be solicited. For all Apple IIs without a lower-case adapter the response must be Y (convert to UPPER CASE first).

From the next-appearing SKILL MENU, select the phonetic SKILL for which the sentences are to be displayed. On the screen following, the number of sentences on file appears in addition to the SKILL TRACE LINE. The entry requested is the sentence number at which the review is to commence.

The procedure for entering this number is identical to that outlined under the RESET STARTING SENTENCE function of the MANIPULATE STUDENT RECORDS task.

After entering the number and pressing RETURN, the appropriate sentence is formatted on the screen. If a conversion to UPPER-CASE was requested, all letters will appear in UPPER-CASE.

Pressing RETURN proceeds to the next sentence, whereas pressing ESC and reaching the end of the sentences returns to the TASK MENU.

Note that an inability to display lower-case letters is not related to the high-resolution lower-case display used during teaching sessions.

RESETTING THE PASSWORD

The password cannot be reset while the program is running. Rather, it is accomplished by altering the value between the brackets in line #2 of the Applesoft BASIC program named PHONICS. When purchased, this line reads:

```
2 PASSWRD$ = CHR$ (26)
```

It is recommended that the password remain a 3-key combination, formed by simultaneously pressing CTRL, SHIFT and a lettered key (CTRL-SHIFT-letter). Additionally, values already assigned to the special-function keys should be avoided (6, 17, 19, 63).

To find the new value of the desired password, enter the following and replace the word 'password' between the quotation marks with the actual 3-key-combination password desired.

```
PRINT ESC("password")
```

For the current password, note that the value printed is 26 - the value shown in line #2 above.

If the procedure for making the password change is not already known, it is suggested that a 'copy' be used for practice - and peace of mind. It is a relatively simple task once the new password value has been determined. In essence, it involves LOADing the program into memory, changing the value in line #2 and then replacing the 'old' program with the 'new' program.

To LOAD the program named PHONICS into memory, enter the following and press RETURN:

LOAD PHONICS

To display the contents of line #2 for reference purposes while making the change, enter the following and press RETURN:

LIST 2

Next, enter the new line exactly as LISTed, commencing with the 2 and stopping after entering the left bracket. Then enter the new password value, followed by entering the closing bracket. Now press RETURN. The new password is now in effect in the program in memory, but to make the change permanent, the 'new' program must replace the 'old' program on the diskette.

To prevent accidental erasure of the program named PHONICS, it was LOCKed at time of purchase. To enable the 'new' version to replace the 'old', it must first be UNLOCKed. To do so, enter the following and press RETURN:

UNLOCK PHONICS

Now the 'new' program can be SAVEd by replacing the 'old'. To do so, enter the following and press RETURN:

SAVE PHONICS

The new password has now been made permanent on disk and everytime the password is requested, the new 3-key password must be entered. To protect the program from accidental erasure, it should, however, be again LOCKed. To do so, enter the following and press RETURN:

LOCK PHONICS

RECOVERING FROM AN ACCIDENTAL RESET

Use of the RESET key (and CTRL-C) during a disk operation may result in physical disk-data damage. Otherwise, RESET under all other conditions will not affect the program or a currently active student record.

An Apple quirk requires that the command RUN be entered to successfully continue using the program. To avoid interfering with programs to be subsequently run, the user should ensure that the program is never terminated without the message SESSION TERMINATED appearing on the screen.

SPECIAL-FUNCTION KEYS

CTRL-SHIFT-Z:	(First-level password, changeable) Password to enter the program Terminate session and return to TASK MENU Confirm all student records may be cleared
CTRL-Q:	(Second-level password, not changeable) Terminate session and exit the program
CTRL-F:	Faster (increase) writing/substitution speed
CTRL-S:	Slower (decrease) writing/substitution speed
?:	Display current-session student progress

THE UPDATE PROGRAM

INTRODUCTION

The program named UPDATE provides a simple and fast means for altering, adding to or totally replacing the phonetic material included for use in the WORKING WITH WORDS program. Although it will generally be used in making minor alterations to the included phonetic material, its use in creating small units of classroom-tailored data should not be overlooked. One does not have to be a computer expert to use this program and it requires only a few minutes to enter sufficient material for use over a number of sessions - data which can support current instruction perfectly.

Before commencing to use the UPDATE program, it should be verified that the computer to be used has a keyboard capable of **generating lower-case letters,** as well as the capability to **display lower-case letters.** Computers with these capabilities are models such as the Apple IIe and Apple IIc.

UPDATE PROGRAM OVERVIEW

Following program start-up, a single-line message is displayed to indicate that the UPDATE program is now executing (running). This message is immediately followed by the main menu, the phonetic SKILL MENU.

The phonetic SKILL MENU, identical to the one used in the WORKING WITH WORDS program, serves two distinct functions. First, it identifies the 'rules' governing the substitution in the phonetic material selected. Second, it identifies the name of the data file to which new material will be added or from which existing material will be retrieved.

The term 'data file' refers to the collection of all similar phonetic skill material stored on the diskette. For example, all initial consonant phonetic material makes up a data file.

The term 'file name' refers to the name assigned to a data file so that it may be uniquely identified by this name. For example, all phonetic skill data files end with the suffix DATA. To make them unique, each has been assigned a unique two-letter prefix in which the first letter indicates the type of substitution to be performed (I = initial, M = medial, F = final)

and the second letter indicates whether the data file contains consonant (C) substitution data, vowel (V) substitution data or blend (B) substitution data. Thus there are five unique data file names on the original diskette which are:

ICDATA - Initial Consonant DATA
IBDATA - Initial Blend DATA
MVDATA - Medial Vowel DATA
FCDATA - Final Consonant DATA
FBDATA - Final Blend DATA

Making a phonetic SKILL MENU selection is followed by the Update FUNCTION MENU. This menu permits both the addition and the replacement of sentences.

The 'Add New Sentences' function is used, as the name implies, to add new sentences to the data file identified by the SKILL MENU selection. When this file name already exists, the data file is first UNLOCKed and new sentences may then be added to the end of this data file. When this file name does not exist (it could have been DELETEd or RENAMEd), an 'empty' data file is first prepared on disk, following which it is treated in the same manner as any other existing data file. In this manner, supplemental material can be prepared 'from scratch'.

The 'Add New Sentences' function requires three keyboard entries (data items), namely the sentence in which the correct answer is surrounded by brackets, alternative 1 and alternative 2. During entry of each requested data item, the option of cancelling the 'add' update function is provided. If the cancellation option is exercised here, a return to the Update FUNCTION MENU follows. Following entry of the second alternative, another cancellation option may be exercised - namely that of cancelling the writing to disk. If the cancellation option is exercised here, the three data items just entered are 'erased' and may be re-entered. If not exercised, the new sentence is written to disk and the 'add' cycle is repeated, commencing with the first data item (another sentence). Following termination of the 'add' cycle, the data file is then again LOCKed.

The 'Replace Sentences' function selection is used, as the name implies, to replace existing sentences in the data file identified by the SKILL MENU selection. The data file is assumed to exist and if it does not, an error message is displayed, followed by a return to the Update FUNCTION MENU. When the data file is found, it is first UNLOCKed and the number of sentences contained therein is retrieved for display. Next, the sentence number is requested for the

sentence to be replaced. The sentence, thus identified, is retrieved from disk and displayed. This permits verification that the sentence displayed is indeed the sentence intended to be replaced. Following confirmation, a replacement sentence is prepared as in the 'Add New Sentences' function. Entry of the three data items and waiving the last cancellation option is then followed by writing the replacement data to disk. The 'replace' cycle is then repeated, commencing with the identification of the next sentence to be replaced. Following termination of the 'replace' cycle, the data file is then again LOCKed.

Note that the sentence number used in this function selection is the number displayed in the 'Browse Through Sentences' Task of WORKING WITH WORDS.

HOW SUBSTITUTION DATA ARE CREATED

The UPDATE program requires only three user-supplied data entries, namely the sentence (containing the bracketed correct answer) and two wrong alternatives. WORKING WITH WORDS, however, additionally requires the substitution starting position and ending positions in the correct answer (KEY word). To obtain this information, the UPDATE program makes the following assumptions:

1. Initial consonant substitutions start and end in the KEY word's leftmost position (cat)
2. Final consonant substitutions start and end in the KEY word's rightmost position. (not)
3. Medial vowel substitutions extend neither to the leftmost nor to the rightmost position in the KEY word. The substitution may be 1 or 2 letters long. (pal or pail)
4. Initial blend substitutions start at the leftmost position in the KEY word and extend right for 2 or 3 letters. The number of letters substituted may be 2 or 3 letters long. (bland or threw)
5. Final blend substitutions end at the rightmost position in the KEY word and extend left for 2 or 3 letters. The substitution may be 2 or 3 letters long. (hand or match)

Note that references to content are omitted and it is quite legitimate (from the UPDATE program's point of view) to substitute a vowel in place of a consonant. This and the above have implications for those wishing to use the WORKING

WITH WORDS program with totally different data, say for instance, with initial vowel data stored in the initial consonant data file, with final diphthong data or final digraph data stored in a final blends data file - or with prefix and suffix data stored in initial blends and final blends data files respectively.

To determine the substitution starting and ending positions required by the WORKING WITH WORDS program, both alternatives are compared to the KEY word and the portion common to all three words (CONSTANT) is used to provide a tentative identification of the position and the length of the substitution. By subsequently applying the above assumptions and by expanding this simple algorithm to account for special cases, the required data are generated.

BEFORE YOU START

The following is to serve as an introductory session to using the UPDATE program. It is also intended as a guide to the steps required in creating solely user-created data files for use with WORKING WITH WORDS.

To begin, ensure that a copy of the WORKING WITH WORDS diskette is used - the updates about to be made will modify the original data.

STARTING THE UPDATE PROGRAM

With exception of a small assembly language routine, the UPDATE program is written entirely in Applesoft BASIC. It is named UPDATE and may be started either with LOAD UPDATE followed by RUN, or alternately by RUN UPDATE. Note that if the WORKING WITH WORDS diskette is used to 'boot' DOS, the WORKING WITH WORDS program will automatically RUN. Pressing RETURN twice in response to the password request will permit the above commands to be entered.

Program execution commences with the message 'Update Program Now Executing', remaining displayed while the assembly language code is being read and poked into memory. The SKILL MENU follows.

THE SKILL MENU

The SKILL MENU is the main menu. From it, any one of five types of phonetic substitution data may be selected to be updated. These SKILL data are:

1. Initial Consonants
2. Initial Blends
3. Medial Vowels
4. Final Consonants
5. Final Blends

Program termination is not menu selectable. Rather, program termination is achieved as indicated on the bottom of the screen, by pressing the ESC key.

Making a SKILL MENU selection is accomplished by first pointing to (highlighting) the number preceding the desired SKILL for which the data are to be updated. Pressing the RETURN key then completes the selection.

Should the program be accidentally terminated, it is necessary only to enter RUN, followed by pressing RETURN.

Function: Add New Sentences

In this section, the procedure for adding new sentences to an existing data file is outlined. Note here that the identical procedure is used for adding new sentences to any of the five existing data files - only the SKILL MENU selection differs.

Following program startup, the SKILL MENU points to 'Initial Consonants' (the number 1 beside this phonetic SKILL is highlighted). The frame reads 'Select SKILL By Number'. The rest of the screen reads as follows:

1 - Initial Consonants
2 - Initial Blends
3 - Medial Vowels
4 - Final Consonants
5 - Final Blends

Update which phonetic SKILL's sentences?
Press RETURN when selection is made.
Press ESC to terminate the program.

In choosing a phonetic SKILL, assume that new initial consonant sentences are to be added. This requires selecting '1 - Initial Consonants'.

To make this selection, further pointing is not required and only the 'Press RETURN' instruction need be carried out.

Pressing RETURN is followed by the Update FUNCTION MENU and the first 'trace line' appears - indicating that the 'Initial Consonant' SKILL MENU selection was made. A second trace line displays the file name of the data file in which the initial consonant sentences are stored, namely in ICDATA (Initial Consonant DATA).

The menu's frame reads 'Select Update FUNCTION By Number', and the functions are:

1 - Add New Sentences
2 - Replace Sentences

Below the frame are three messages, namely:

Perform which type of update FUNCTION?
Press RETURN when selection is made.
Press ESC to return to the SKILL MENU.

For adding new data, selecting '1 - Add New Sentences' is required. Since this function is already 'pointed to', all that remains to be done is to press RETURN.

Having conveyed to the UPDATE program that new sentences are to be added to the initial consonants data file named ICDATA, the program now UNLOCKs the data file named ICDATA and retrieves the number of sentences stored in this data file.

The next-appearing screen is the **'data entry screen'** - which always displays five trace lines. It is initially formatted as shown below. Note the fourth trace line which indicates that there are 110 sentences in this data file and that we are in the process of adding sentence number 111.

SKILL . . . . . Initial Consonants
File Name. . . . . ICDATA
Update function. . . Adding Sentences
Sentences On File. 110
Current Sentence # 111

Enter the new sentence and remember to
put brackets ( ) around the KEY word!
Press RETURN when done or ESC to exit.

Note the reminder to enclose the KEY word (correct answer) in brackets so that the KEY word's position and its contents may be identified. Note also that the position of the 40 consecutive dashes serves to indicate where the new sentence will be displayed as it is entered, whereas their count at any time indicates the remaining number of letters which may still be entered.

To now enter sentence number 111, assume that the following data are to appear during a student session.

Sentence	- My *** is at home
KEY word	- dad
Alternative 1	- bad
Alternative 2	- mad

Placing the KEY word back into the sentence, it would obviously have to read:

My dad is at home.

Placing the brackets around the KEY word, the sentence would be entered as:

My (dad) is at home.

Now entry of the sentence may proceed. Note that as a letter is entered, it replaces the leftmost dash. Should a typing error occur, the left arrow or the delete key may be used to erase the rightmost letter. Once the sentence has been entered, the next step is to press RETURN.

Pressing RETURN results in the erasure of the unused dashes and by displaying:

KEY word . . . . . dad
Alternative 1. . . - - -

The bottom of the screen reads:

Enter the first incorrect alternative.
Press RETURN when done or ESC to exit.

The three dashes beside the word Alternative 1 indicate that the alternative will be assembled there as it is keyed in and that up to 3 letters may be entered. Now either alternative 1 or alternative 2 could be entered, but for the sake of consistency, enter the alternative 'bad' - then press RETURN.

If the word 'bad' was correctly entered, the screen appears as follows:

KEY word . . . . . dad
Alternative 1 . . . . bad
Alternative 2. . . - - -

The bottom of the screen now reads:

Enter the second incorrect alternative.
Press RETURN when done or ESC to exit.

The three dashes beside the word Alternative 2 indicate that the second alternative will be assembled here and that up to 3 letters may be entered. Now enter the second alternative, namely 'mad' - then press RETURN.

The screen now reads:

KEY word . . . . . dad
Alternative 1 . . . . bad
Alternative 2 . . . . mad

	123
CONSTANT	ad
Substitution 1	b
Substitution 2	m

Write this sentence to disk now?
Press ESC to cancel, RETURN to proceed.

Before continuing, note the CONSTANT ' ad' and the substitution letters 'b' and 'm'. These are the exact components used to dynamically create the two words 'bad' and 'mad' (along with the word 'dad') in the WORKING WITH WORDS program.

Satisfied that the data entered are correct, now press RETURN to indicate that the sentence is to be written to disk. The write to disk then takes place and the trace lines are updated to reflect that the file ICDATA now contains 111 sentences and that the next sentence to be added is sentence number 112.

Had ESC been pressed instead, the cancel-write option would have been exercised. Instead of writing the new data to the diskette, the three entries made would have been 'scrapped' and the 'data entry screen' would have reverted to the identical state preceding entry of the 111th sentence.

At this time, the following sentences may be added. Note the need to capitalize both alternatives for the beginning KEY word.

1.	The (bat) broke.	sat	pat
2.	We rode in a (car).	far	tar
3.	(Mice) can run fast.	Nice	Dice

To terminate the 'Add New Sentences' function, press ESC once to return to the Update FUNCTION MENU. To return to the SKILL MENU, press ESC again and note that the data file named ICDATA is again LOCKED.

If desired, the UPDATE program may be terminated now by pressing ESC and the WORKING WITH WORDS program may be used to 'try out' the sentence(s) added.

Function: Replace Sentences

In this section, the procedure for replacing sentences in a data file is outlined. Note here that the identical procedure is used for replacing sentences in any of the five data files - only the SKILL MENU selection differs.

Begin by again making the initial consonant SKILL selection, followed this time, however, by making the 'Replace Sentences' update function selection.

With these selections, the initial consonant SKILL selection will have identified the sentences to be updated as initial consonant data stored in the data file named ICDATA. The 'Replace Sentences' update function selection will have been followed by UNLOCKing the data file named ICDATA and retrieving the count of the number of sentences stored therein. A trace line displaying this count will indicate it to be 110 (the original number of sentences) plus the number of new sentences added using the 'Add New Sentences' function. Lastly, 3 dashes are displayed in the center of the screen and two lines at the bottom of the screen read:

Enter sentence number to be replaced.
Press RETURN when done or ESC to exit.

The dashes serve to again indicate where the response will be assembled and that the response may consist of up to 3 digits.

To replace sentence number 1, for example, enter '1' and then press RETURN. Sentence number 1 is now retrieved from the

data file named ICDATA and formatted on the screen as follows:

We rode in a ***.

KEY WORD - cab
Alternative 1 - tab
Alternative 2 - nab

Cancel replacing this sentence?
Press ESC to cancel, RETURN to proceed.

Having verified that this is indeed the sentence to be replaced, in response to the message 'Cancel replacing this sentence?', press RETURN to proceed with its replacement. The ESC key 'cancel' option is thus waived and the task of entering the replacement sentence may now begin.

The next screen will be recognized as the familiar 'data entry screen' used in the 'Add New Sentences' function and the procedure for entering the replacement data is the same as outlined therein. Using the same data as for the 'Add New Sentences' function, enter the following:

Sentence	- My dad is at home.
KEY word	- dad
Alternative 1	- bad
Alternative 2	- mad

If the message BRACKETS ARE MISSING OR UNPAIRED appears, it is an indication that the UPDATE program was unable to determine which word in the sentence was to serve as the KEY word. After a brief pause, the sentence entered is erased and the sentence may be re-entered as follows:

My (dad) is at home.

Following entry of the two alternatives, in response to the message 'Write this sentence to disk now?', press RETURN to indicate that the sentence is to be written to disk. Replacement sentence number 1 is then written to disk and permanently replaces the old sentence number 1 in the data file named ICDATA.

Another replacement cycle now commences. For additional practice, the following sentences may be used to replace sentences 2 through 4.

2. The (bat) broke.	sat	pat
3. We rode in a (car).	far	tar
4. (Mice) can run fast.	Nice	Dice

Before terminating the 'Replace Sentences' function, again indicate that sentence number 1 is to be replaced - just to view the new replacement sentence. The first sentence replaced is thus retrieved from the data file ICDATA, to be displayed as indicated below. Note that there are no brackets in the sentence; that the KEY word has been deleted from the sentence and that 3 asterisks (***) are shown in their place.

My *** is at home.

KEY word	- dad
Alternative 1	- bad
Alternative 2	- mad

Rather than replace the sentence, this time use the ESC key to return to the Update FUNCTION MENU. Pressing ESC once more returns to the SKILL MENU, at which time the data file named ICDATA is again LOCKed.

For experimenting with 'medial vowel' data, the following may be entered.

1. I (feel) cold.	foal	foil
2. We swim in a (pool).	pail	peal
3. (Sit) over there.	Sat	Set

CREATING REPLACEMENT DATA

The 'Add New Sentences' function may also be used to create replacement data for use in place of the original data. The procedure consists of first creating an empty data file (containing 0 sentences) and then adding sentences in the same manner as outlined in 'FUNCTION: Add New Sentences'.

To create an empty data file simply requires 'hiding' the data file from the UPDATE program. This 'hiding' is accomplished by renaming an existing data file so that the new name differs from the name the UPDATE program expects to find. The DOS RENAME command can accomplish just that.

By renaming the current data files (presently the original data files), new data files can be created which, in turn, may be

renamed. In this manner a whole series of renamed data files can be created and contained for use on a single diskette. To subsequently use a particular data file, the renaming procedure is reversed by using the RENAME command to again restore this data file's original name before running the WORKING WITH WORDS program.

'HIDING' THE DATA FILES

To 'hide' the current data files named ICDATA, IBDATA, MVDATA, FCDATA and FBDATA respectively, it is assumed the DOS has already been 'booted' and the DOS commands may be entered. Since the original data files are LOCKed to prevent accidental modification or deletion, they must first be UNLOCKed before they can be RENAMEd. It is recommended that all 5 data files be UNLOCKed and RENAMEd with an identical prefix, leaving the suffix to retain the original file names. Note that a data file may have a name up to 30 characters in length, which allows ample room for meaningful data file identification.

To UNLOCK a data file, the command entered is UNLOCK 'filename', where 'filename' is replaced by the name of the data file to be UNLOCKed. To UNLOCK the data file named ICDATA, for example, enter the following - then press RETURN:

UNLOCK ICDATA

Below are the names of all files to be UNLOCKed, their current name and a suggested new name.

Phonetic Skill	'currentname'	'newname'
Initial Consonants	ICDATA	ORIG.ICDATA
Initial Blends	IBDATA	ORIG.IBDATA
Medial Vowels, etc.	MVDATA	ORIG.MVDATA
Final Consonants	FCDATA	ORIG.FCDATA
Final Blends	FBDATA	ORIG.FBDATA

It is now possible to RENAME the data files. To RENAME a data file the command is RENAME 'currentname', 'newname' where 'currentname' is the present file name of the data file to be RENAMEd and 'newname' is the new name to be assigned to this file. For example, to RENAME the data file ICDATA to the new name ORIG.ICDATA, enter the following and press RETURN:

RENAME ICDATA,ORIG.ICDATA

The rest of the data files can now be RENAMEd in the same manner. To change a data file back to its original name, the procedure is reversed as follows:

RENAME ORIG.ICDATA,ICDATA

To again LOCK the data files to prevent accidental modification or deletion, the command to be entered is LOCK 'filename', where the word 'filename' is replaced with the name of the data file to be LOCKed. For example, to LOCK the renamed file ORIG.ICDATA, enter the following and press RETURN.

LOCK ORIG.ICDATA

When all RENAMEd data files have been LOCKed, this completes the steps required to 'hide' the data files. When the UPDATE program is subsequently RUN, the first 'add function' selection for a selected SKILL then automatically creates the appropriately named, 'empty' data file.

NOTE: It is important to RENAME a data file with a unique 'newname'; that is, with a name currently not found on the diskette. To determine the names of all data files stored on a diskette, enter CATALOG and press RETURN.

FEEDBACK MESSAGES

Most feedback messages should be self-explanatory and the additional detail presented here should not normally be required.

Messages: BASIC related

1. DATA statement is no longer correct!
2. APPLESOFT BASIC ERROR. PLEASE REPORT.
   ERROR CODE ENCOUNTERED IS 'errorcode'
   ERROR IN LINE 'linenumber'

Message number 1 should not occur under normal conditions. It is a 'safety' feature used to indicate that either the DATA statement at the end of the UPDATE program or the test for the correctness of its entries has been altered. A 'fresh copy' of the UPDATE program should resolve the problem.

Message number 2 should not occur under normal conditions. It is a 'safety' feature used to indicate that the UPDATE program is not working correctly. A 'fresh copy' of the UPDATE program should resolve the problem.

Messages: Disk related

1. Disk is PROTECTED with write-protect tab
   First REMOVE the write-protect tab,
   then enter RUN and press RETURN.
2. File 'filename' does not exist.
3. DOS (DISK) ERROR.
   ERROR CODE ENCOUNTERED IS 'errorcode'

Message number 1 will occur anytime the notch on the diskette is covered, preventing the UPDATE program from writing onto the diskette. The covering 'tab' must be removed before again RUNning the program.

Message number 2 will occur when the UPDATE program is unable to locate the data file named 'filename' during the 'Replace Sentences' function. It is probably due to using the RENAME or DELETE command to 'hide' this data file.

Message number 3 will occur anytime a 'read' or a 'write' to disk cannot be carried out. The reason may be that the disk drive 'door' is open, that the diskette is not inserted properly in the disk drive, or that the diskette may be temporarily (or permanently) physically damaged. It may be necessary to consult the DOS manual if the solution is not immediately obvious.

Messages: Data-limitation related

1. THIS CHARACTER HAS BEEN DISALLOWED.
2. NUMBER IS OUT OF RANGE OR INVALID
3. KEY IGNORED. FIELD IS FULL ALREADY.
4. BRACKETS ARE MISSING OR UNPAIRED.
5. KEY WORD MISSING BETWEEN BRACKETS.
6. KEY WORD TOO SHORT OR >9 LETTERS LONG.
7. MAXIMUM RECORD LENGTH OF 51 EXCEEDED.
8. MAXIMUM WORD LENGTH OF 14 EXCEEDED.
9. ALTERNATIVE IS TOO SHORT.
10. EXPECTED DATA HAS NOT BEEN ENTERED.
11. KEY WORD ALONE CANNOT BE A SENTENCE.

Message number 1 will occur if a special character key such as a comma, colon or blank (space) is pressed while entering an alternative - it will not occur when these letters are used in the sentence. Other special character keys such as the right arrow, asterisk and CTRL (Control) key combination letters will also produce this message - here and elsewhere. Note that the brackets serve a special purpose and should not be used other than for identifying the KEY word.

Message number 2 will occur whenever the number entered is not within the expected range limit.

Message number 3 will occur when a key (other than the left arrow or delete) is pressed when the data field is already full, i.e., when all dashes have been replaced. It may then be appropriate to use the left arrow (or the delete) key to backspace.

Message number 4 will occur when the UPDATE program cannot find a closing bracket in the sentence or when it finds two opening brackets before finding a closing bracket in the sentence. The brackets must be paired to permit the KEY word to be identified.

Message number 5 will occur when the KEY word identified between the brackets in a sentence is either totally missing or consists of only blanks (spaces).

Message number 6 will occur when the KEY word consists of fewer than 2 letters for initial consonant and final consonant substitutions, or fewer than 3 letters for initial blend, final blend and medial vowel substitutions. It may also be the result of a 9-letter length limitation imposed by the WORKING WITH WORDS program. This limitation cannot be bypassed.

Message number 7 is the result of a limitation imposed by the WORKING WITH WORDS program. It merely indicates that the number of letters, digits and control characters to be written to disk exceed the maximum of 51 allotted for this purpose. There is no way to bypass this limitation and the most acceptable solution is usually to shorten the sentence.

Message number 8 is the result of a limitation imposed by the WORKING WITH WORDS program.

Message number 9 will occur following entry of an initial consonant, medial vowel or final consonant alternative where the alternative entered has fewer letters than the KEY word. For an initial or final blend alternative, the alternative entered is 2 or more letters shorter than the KEY word.

Message number 10 will occur whenever the RETURN key only is pressed in response to a requested data entry.

Message number 11 will occur when the bracketed KEY word is the only entry in place of a sentence. At least 1 other letter is required.

Messages: Substitution related

1. THIS IS AN INITIAL SUBSTITUTION.
2. THIS IS A MEDIAL SUBSTITUTION.
3. THIS IS A FINAL SUBSTITUTION.
4. NO SUBSTITUTION IS TAKING PLACE.
5. ALL LETTERS ARE BEING SUBSTITUTED.
6. TWO OR MORE LETTERS BEING SUBSTITUTED.
7. THREE OR MORE LETTERS BEING SUBSTITUTED.
8. FOUR OR MORE LETTERS BEING SUBSTITUTED.
9. NOT A SINGLE, CONTIGUOUS SUBSTITUTION.

Messages 1 through 3 will occur when a substitution violates the positional substitution rules 1 through 5 defined under the section 'How The UPDATE Program Creates Substitution Data'. For example, message number 3 would be generated for an initial consonant substitution when the initial position of an alternative remains the same as that of the KEY word - and the alternative's last position differs from that of the KEY word.

Messages 4 and 5 will occur when an alternative is the same word as the KEY word or when all letters in the alternative differ from the letters in the KEY word respectively.

Messages 6 through 8 will occur when a substitution violates the substitution length rules 1 through 5 defined under the section 'How The UPDATE Program Creates Substitution Data'. For example, message number 6 would occur for an initial consonant substitution when both the first and the second letter of the alternative differ from the KEY word. The cause for this message may not be apparent, especially when one or more letters remain constant between the letters being substituted.

Message number 9 will occur in medial vowel substitutions when the substitution length exceeds 2 letters and an intervening letter remains constant. This is a 'special case' of error messages 7 and 8.

TRYING OUT THE NEW SENTENCES

The WORKING WITH WORDS program may be RUN anytime the expected data file(s) can be found, that is, when the expected data files have not been 'hidden' or DELETEd. Note that an 'empty' data file can and will be found.

Following use of the UPDATE program to replace sentences or to create new data files, it is important to first 'clear' or 'reset'

student records when next running the WORKING WITH WORDS program. This avoids the problem of using student records which still reflect the state of the last session terminated using the old data files. Failure to do so can result in the situation where some students find all of the new data; some students find more new data than others; and other students find no new data at all. This situation will not occur when the UPDATE program is used only to add more sentences to an existing data file.

To view the sentence(s) added to the end of the initial consonant data file with the BROWSE THROUGH SENTENCES task, it is convenient to commence 'browsing' at sentence number 111. To use these same sentence(s) in a student session, a student record may be 'reset' to commence directly at sentence number 111.

To use the sentence(s) replaced at the beginning of the initial consonant data file in a student session, it is important to remember that a previously-used student record must first be 'reset' to start the next session at sentence number 1. A newly created student record may be used, however, in which case the next-session starting sentence automatically commences at sentence number 1.

SUPPORT

If you have any questions or problems, call Queue, Inc. at 1-800-232-2224 (in Connecticut, Alaska and Canada call 203-335-0908). Defective disks will be replaced free of charge up to 90 days after invoice date. Disks damaged after 90 days may be replaced at $10.00 per disk. Mail the damaged disk and appropriate payment to Queue at 338 Commerce Drive, Fairfield, CT 06430, for a prompt replacement.

Backup disks are available for $10.00 per disk. Customers are limited to one backup disk for each disk purchased. Backup disks are for archival purposes only.

Never expose any computer software to excessive heat or cold. Do not leave your software near a strong magnetic field such as might be produced by an electric appliance, stereo, or speaker magnet. Always place your software in its sleeve when you are not using it. This will protect it from dust and finger prints. Finally, never touch the exposed parts of the disk which are visible through the holes in the disk cover.